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ABSTRACT

In 1972, a group of French universities began a joint project under the aegis of the Centre for Educational Research and Innovation. Common concerns of the universities - specifically, the rising cost of education, the need for assessing effectiveness and efficiency of programs, and a 1968 law giving increased autonomy to French universities - led to a study seeking to create the first methodological instruments of modern university management based on the preparation of activities and systematic control of their performance. Since the group's needs and organizational structures were different from those addressed by most foreign studies, and lack of information was a significant problem, the French universities decided to concentrate on calculating costs of their final outputs: instruction and research. The costs considered were: personnel, capital, operating, and student aid costs. Several kinds of budgetary control and the application of a simulation model are recommended for management of French universities. (MSE)

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Programme Research Group No. 2:

"BUDGET CONTROL PROCEDURES AND METHODS FOR EVALUATING THE UNIT COSTS OF ACTIVITIES AND OUTPUTS OF HIGHER EDUCATIONAL INSTITUTIONS"

- Interim Report -

With the agreement of the French Ministry of Education and the effective support of the Standing Conference of University Presidents, the CERI Secretariat invited the French universities in the spring of 1972 to become associated with the activities of the IMHE Programme and to make a preferential classification of the themes they would like to study. Analysis of the replies to this request showed that co-operation between seven French institutions (Universities of Dijon, Grenoble II, Toulouse-Le-Mirail, Toulouse-Paul-Sabatier, Paris I-Panthéon-Sorbonne, Paris IX-Dauphine, Paris X-Nanterre) was immediately desirable and feasible on the general theme "Analysis of unit costs and budget control procedures". On the initiative of the Programme Secretariat, the representatives of these seven universities, joined by delegates of the Catholic University of Louvain, the State University of Liege (Belgium), the University of Fribourg (Switzerland) and later, the Bavarian Institute for University Research and Planning, were able at several meetings gradually to define the general orientation of their joint projects [1].

It was not by chance that preoccupations tended to converge; the Law on the orientation of higher education passed by the French Parliament in 1968 gave the French universities autonomy of management and thus broke with long-standing tradition (at least in principle). At the same time, the realisation of the growing cost of education made a rationalisation drive urgently necessary. Questions needing precise answers are frequently asked about the allocation of resources among the various disciplines, the unit costs of graduate output, the method of planning or evaluating university programmes, the criteria for determining their efficiency. Even within the universities an increasing number of senior academics, researchers, "managers" and teachers, feel more and more strongly that the university should seek to fulfil its purpose by allocating its limited resources efficiently, by using modern management techniques adapted to its specific activities and by systematically studying its internal operating methods.

These general preoccupations are the basis of the research undertaken by the French group. Starting from the observation that in most French higher educational institutions it is difficult, even impossible, with current management methods and established information systems, to meet the legitimate concern for rationalisation of choices referred to above, this study seeks to create the first methodological instruments of modern university management based on the preparation of activities and systematic control of their performance.

GENERAL ORIENTATION OF THE WORK OF THE FRENCH GROUP

Since studies on the same subject have been carried out abroad, it may be asked whether the French group could not have been content simply to adapt the methodology already used elsewhere to the case of the French universities. But in most cases the objectives and types of cost encountered in the foreign studies available were rather remote from the concerns of the French group. The study that came nearest was the one carried out by the NCHEMS [2] but the far-reaching differences in structure and operation between universities in different countries made any simple transposition of the method impossible.

Professor J. Bénard's contribution[3] enabled the French group to formulate an appropriate

1. The work done by the seven French universities is jointly financed by the French Ministry of Education (55% of the total cost) and Shell-France (45% of the total cost) under an agreement concluded between that Company and CERI.

2. National Center for Higher Education Management System
   - Cost finding principles and procedures 1971.
   - Implantation of NCHEMS planning and management tools at California State University, Fullerton, August 1973.

3. J. Bénard: "A systematic economic approach to university cost analysis", University of Paris I.

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methodology, each research team finding its objectives placed in a broader perspective. The university can be considered as an "organic complex of activities", as a particularly complex production system, insofar as its objectives are seldom explicitly stated, its outputs often difficult to identify, and some of them hard to quantify and impossible to evaluate. The study of costs should make it possible to discern the operation of the system more exactly and to bring out the interrelationships between subsystems, which are often inadequately perceived.

It should be emphasised forthwith that the unit costs which it is proposed to calculate will mostly be retrospective average costs: these are positive costs and not normative costs which would require research on the average "quality" of outputs or the effectiveness of the pedagogical resources employed, and such research is beyond the present scope of the French group having regard to its available time and resources. However, this study which is relatively simple in principle (but which requires great efforts since most of the French universities have very little information available) makes it possible to initiate an interesting analysis on the causes of the differences emerging between the various costs: within the same university, explanation of the cost difference between various types of instruction; between several universities, explanation of the cost difference for various diplomas. Cost comparison should therefore enable those responsible to realise the impact on costs of the specific characteristics of the institution and of its various activities. In addition, on the basis of an in-depth study of the structure of total costs it should be possible to envisage the calculation of certain "marginal" costs, e.g. cost of accepting one additional student in a unit of value (or course), cost of opening a new unit of value (or course).

Analysis of the university as a production system implied for the French group the need to identify the outputs of a higher educational institution[1].

A distinction immediately emerged between final outputs and intermediate outputs. This distinction is based on the delimitation of the productive system, i.e. on the definition of the selected "decision-maker". Among the possible options (UER or department, university, educational system, State, Nation) the choice made was the university as part of the educational system. Consequently "final output" will denote any finished or unfinished output having undergone a process of transformation within the university, after which it is offered to the community through a real or fictitious market. An output will be intermediate when the demander will of necessity be the university itself.

We thus have the following classification:

- final outputs
  - of instruction
  - of research
  - of public service activities
  - accessory,
- intermediate outputs
  - services
  - administration
  - miscellaneous,
- outputs awaiting allocation.

The French group decided to concentrate on the calculation of costs of main final outputs. But the problem is posed in very different terms for instruction and for research. As regards research, it was found that in the present state of the work on measurement of research outputs[2], it would be practically impossible to move from global costs to significant unit costs; this does not mean that research costs will be disregarded but that it will be necessary to limit the exercise to calculating the share of research costs in total university costs. As for instructional costs, outputs are easier to identify and quantify than in the case of research. However, the problem of calculating costs is posed in very different terms according as the university does or does not have information available on student flows and costs over several years[3]. It also differs considerably according as a department provides all the courses for a given diploma or only a few of them[4]. Lastly, a clear distinction must be drawn between degrees or diplomas with a time structure (e.g. "Licence" in 4 years) and those based on units of value (or "credits") without a U.V. being really located in a year. For an analysis of these various situations it was necessary to determine beforehand the costs to be taken into account, and thus to delimit the field of observation. Focussing the analysis on the department would have been too restrictive in view of the centralised nature of the French educational system and the very small margin of discretion left to the departmental Director. Locating the problem at State or national level would have opened too wide a field of investigation for the context of the study and one rather remote from the immediate concerns of the university authorities. Accordingly the university was selected as the frame of reference, which implies that the primary "decision-maker" is the supposedly autonomous university.

Delimitation of the field of observation is certainly a necessary step, but it is insufficient. The French universities are in a special budgetary situation: their management autonomy is limited to what is conventionally called the "university budget", a simple operating budget excluding of course capital expenditure, but also teachers' salaries and a large part of the remuneration of administrative, technical, manual and service personnel, for which the State is directly responsible.

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1. G. Catoire, C. Piganiol: "Identification et mesure des produits de l'Université" (Identification and measurement of university outputs), University of Paris X - Nanterre.
2. C. Echevin: "Aperçu sur l'activité de recherche des universités, son coût et son output" (Survey of university research activity, its cost and output), University of Grenoble II.
3. The store of information in French universities is extremely poor; of the 7 universities in the group, only two (Dijon and Toulouse-Sabatier) have complete statistics covering several years.
4. A. Babeau: "Etude structurelle de certaines formes de pluridisciplinarité dans l'Université de Paris X-Nanterre" (Structural study of certain forms of pluridisciplinarity in the University of Paris X - Nanterre).

Taking a narrow view of "cost" calculation at university level, one might consider only expenditures passing through the university budget, including the various related budgets (university library, sports centre). But such a calculation would be of little interest, for various reasons: it would take account of only part of the costs deriving from the existence of the university; any comparison with foreign countries would be impossible; and the university's management autonomy does apply to the whole of its budget[1] even if current budgetary procedure imposes certain constraints on such autonomy.

The French group therefore decided not to adopt this narrow approach and to widen the field of investigation. Consequently the first step is to identify the cost of all the resources available to the university (personnel, operation, plant, equipment, buildings and land) and the various forms of assistance provided by the State to students. Moreover, this implies the deliberate adoption of an "economic" approach and not a purely accounting one: firstly, because the fixed asset depreciation which it is proposed to take into consideration is an economic cost which does not as yet appear anywhere explicitly in public accounting; secondly, because the approach proposed for land and buildings relates typically to the economic concept of opportunity cost (cost of what is foregone). We shall go into this in greater detail when dealing with the main types of costs.

TREATMENT OF MAIN CATEGORIES OF COSTS

Four main types of costs were retained: personnel costs, capital costs, operating costs, transfer costs. At the present time it is essentially the first two types that have been the subject of the most thorough discussions on method and the most detailed information searches. Without going into too great technicalities[2], it may be of interest to describe the broad lines of the approach.

Personnel costs

This cost is essentially an accounting cost whose components appear globally and individually in the financial documents of the universities and the State. But as regards the identification and precise evaluation of these various components, the French group had to decide between three sets of alternatives.

1st alternative: benefits approach or contributions approach. The charges to be added to the main remuneration component should be evaluated by taking account of the benefits actually provided if we are determining cost to the nation, but of contributions if we are looking at the matter from the employer's angle, in this case the Ministry of Education or the university. The French group finally adopted the contributions approach.

2nd alternative: individual estimate or average group estimate? Should the method described above be applied individually to each staff member or should we be content with a rougher estimate, for instance by grouping certain staff members with common characteristics? The second solution was adopted, specific proposals being made as regards teaching personnel, research personnel and administrative and technical services. Here we see an important characteristic of the French group's approach, i.e. reasoning on average cost or "smoothed cost", smoothing being done within coherent regroupings eliminating insignificant individual differences only.

3rd alternative: observations throughout the period envisaged or sample survey? Between the extremes of a complete analysis and a study of the university personnel situation during the month considered most representative there are obviously many possible intermediate choices. In view of the diversity of situations, the French group thought it preferable to leave each university free to use the method it considered expedient.

After making these choices it was necessary to work out a method of analysis common to the whole group in view of the size of the remuneration appropriations and the complexity of the corresponding cost. While indexed remuneration (gross indexed salary + residence allowance) offers no problem, the various allowances and benefits received by both teaching and non-teaching staff form such a complicated tangle that one is forced to make a number of simplifying assumptions. The task becomes considerably more complex when taking into account salary-related charges (fiscal and social charges), which it is absolutely essential to do; of course these are only the so-called employer's contributions, the proportion for which the employee is liable being already taken into account in the salary and allowances he receives. Two practical methods are suggested to the universities; the first will be applied preferably in universities possessing data over a long period and wishing to know the trend of personnel costs without spending much time on collecting information on staff payrolls; the second may be used in universities wishing to know personnel costs over a short period (e.g. one or two years). Of course both methods lead to the same result.

In conclusion we should point out that the case of retirement pensions for established staff was reserved and that owing to the lack of data no cost to the State is entered under retirement pensions.

Capital costs

As evaluation of capital costs is practically excluded in French public accounting, the French group had to develop its own methodology and compile the information needed for evaluating this cost. No reliable norm could be established for the life of fixed assets, and the "expert's

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1. Nothing prevents the university from asking for a post in a certain discipline to be transformed into a post in another discipline (though the post must be vacant, as French teachers enjoy the employment guarantees characteristic of the public service).
2. All these problems are widely discussed in "Méthodes de calcul des coûts unitaires d'activités et de produits dans les universités françaises" (Methods of calculating unit costs of activities and outputs in French universities) (Ch. 3) by A. Babeau, C. Cossu, S. Cuenin, 1st version, September 1973.

opinion" appeared to the French group to be the best solution. As regards the value of fixed capital, it appears necessary to use the replacement value in cases where information could be obtained on purchase or construction costs[1]; the discounted value will then be expressed by applying an appropriate coefficient to the purchase value. Buildings for which no information is available might be revalued on an estimate of the current cost of premises of the same area and the same location.

Thereafter the (annual) cost of fixed capital can be determined without difficulty, provided that a clear distinction is drawn between the two possible levels of decision-making at which it might be established. At current management level the concept of accounting cost - depreciation cost - will be retained. On the other hand, at a higher level of decision-making cost is defined in terms of alternative uses that must be foregone; it is then necessary to introduce the concept of opportunity cost in order to arrive at a specifically economic cost. In the context of this study a rate of interest will therefore be applied to fixed capital in order to take account of the financial charge represented by such illiquidity and of the consequent cost to the community.

The fixed capital cost will thus be evaluated by applying the formula of constant annual depreciation which groups physical depreciation and the financial charge deriving therefrom. For land which has an unlimited life, there is obviously no need for depreciation; on the other hand, there is a financial charge, in the context of alternative uses, which simply corresponds to the product of the current value multiplied by the interest rate.

The value of this rate also had to be determined; the French group proposes to adopt a rate of 10%, which corresponds to one of the discount rates used in the preparatory work on the French VIth Plan.

Operating costs

These are costs appearing in the budget of the institutions studied, with the exception of personnel costs, capital costs and transfer costs. Such costs refer to commitment accounting and their nature is given directly by the budget.

As the budget year does not coincide with the academic year, a frame of reference has to be chosen. A priori, two solutions were possible: to choose the budget year and "adjust" student numbers taking account of enrolments over two academic years; or to select the academic year and calculate "commitments" for that period. In the end the latter solution was adopted, various techniques being proposed for expressing operating costs in this framework.

In addition, insofar as interrelationships between university services are not systematically listed and the French group's objective is to achieve a fine breakdown of operating costs, the only possibility is to use fairly arbitrary rules of allocation. Various recommendations were made on this subject and work is currently proceeding on these various points.

Transfer costs

Under this item we find costs not yet listed and constituting aid disbursements to the student and/or his family. The French group has just started on the treatment of these costs, which could be calculated fairly rapidly if the study was limited to direct aids alone (fellowships, various allowances). It would however be far more complex to evaluate the costs incurred through indirect aids: university welfare institutions, State contribution to student social security scheme, etc.

All these costs - personnel costs, capital costs, operating costs, transfer costs - must be the subject of a detailed breakdown. For another basic characteristic of the French group's approach is that it is microeconomic, starting with the finest possible instructional or administrative "output units"; recourse to certain methods of private business accounting and the use of certain concepts of activity analysis prove very revealing in this connection.

USE OF ACTIVITY ANALYSIS

How can we analyse productive activity in a higher educational institution? The French group found it impossible to apply cost-efficiency analysis directly, since data on production alternatives were inadequate, cost functions unknown and appraisal of output "quality" very uncertain.

In the same way input-output analyses had to be rejected, in particular because not all productions (notably research) could be quantified. Activity analysis seemed more appropriate to the objective pursued; the procedure here is to breakdown the productive process into two stages:

1. Consumption of inputs for an activity contributing directly or indirectly to production;
2. Combination of activities for a given production permitting measurement of returns. This second stage cannot be taken into account for productions not strictly quantified.

This type of analysis is therefore based on an exhaustive study of structures; it includes supporting and administrative activities and production of intermediate outputs; for this reason it permits useful thinking on university organisation, cost formation and control; lastly, a detailed knowledge of existing processes is the basis of a substitution study of productive methods and makes it possible in the long run to carry out decision-making analyses.

Definition and classification of the basic cell of the system: the UEA (Elementary Unit of Activity)

The analysis of the activity structure and the desire for maximum disaggregation in the light of existing information possibilities led to a definition of the basic cell of this system:

The Elementary Unit of Activity (UEA) is the employment of the smallest set of resources co-ordinated into a process in order to obtain

1. G. Hamard: "Note sur le patrimoine de l'Université de Paris X - Nanterre" (Note on the capital assets of the University of Paris X-Nanterre).

one (or more) output(s) or one (or more) service(s), either final or intermediate.

This concept is not new; it is quite simply the French analytical accounting method of so-called "homogeneous sections" recommended by the French Accounting Plan. It covers the same three essential requirements:

- Homogeneous unit of activity: the combination of inputs is a single process within the UEA (note that the other two requirements may lead to acceptance of similar processes with the same object);
- Cost centre: the UEA is capable of being "regarded as likely to be the subject of a specific regrouping of charges or costs".
- Responsibility centre: the UEA is placed under a single authority; this point is essential only if the accounting system is oriented towards budgetary control.

Wherever possible, an effort should be made to elaborate a unit of work, i.e. a unit of measurement of the level of activity of the UEA giving the best explanation of input consumption or cost (at fixed prices and technologies).

The classification adopted is similar to that defined in the "Program Classification Structure" (PCS) of NCHEMS, but does not coincide exactly with it.

- Directly productive UEAs:
  - UEA of instruction;
  - UEA of research (no unit of work as the output is not quantified);
  - UEA of public service.
- Indirectly productive UEAs:
  - UEAs supplying services; defined by the fact that their output is measurable and effectively measured. It is possible to find in this category fictitious UEAs, i.e. not corresponding to a real division of the institution but forming a cost centre (building costs);
  - administrative UEAs: either at institution level or at UER level;
  - miscellaneous UEAs: not coming into the two previous categories either because their object is different or because their services are not measured.

It should be noted that indirectly productive UEAs can accessorily provide final outputs (e.g. assignments of services).

Activity costs

The primary objective is to calculate globally the complete cost of each UEA and then to deduce from it unit costs of activity for UEAs having a unit of work.

It should be noted that the degree of certainty with which consumptions of inputs by each UEA are known is a variable: in this perspective the French group was led to distinguish three cost categories:

- direct costs defined as all charges directly apportioned to the UEA in question;
- semi-direct costs: all charges apportioned in a UEA after transit in another UEA (supply of services) as a result of consumption of the output of the second UEA by the first such consumption being known perfectly in physical terms;
- indirect costs: all charges apportioned in a UEA after transit in another UEA (supply of services) as a result of consumption of the outputs of the second UEA by the first, such consumption being merely estimated by an allocation rule (non-measurable output).

On the basis of this classification the procedure for calculating global costs of UEAs comprises three stages:

- Stage 1: allocation of direct costs to UEAs; all university costs as previously defined must be fully allocated to all UEAs with the exception of some directly concerning students (student aid) and thus directly related to an output without reference to the activity concept.

One important point should be stressed: the French group found it impossible to consider that teaching personnel costs were only instructional costs; in fact, even if the statutory service obligations apply only to teaching hours, teachers have other activities such as scientific research and administration of higher educational institutions. Salary costs correspond to all these activities. What proportion should be allocated respectively to teaching activity, research activity and administrative activity? In the absence of other data[1], partial and local surveys were initiated on the time budget of university teachers[2]. On this (imperfect) basis it will be possible to improve the direct cost allocation procedure and at least to avoid the error of regarding time spent by teachers on university administration or research as representing no cost. At the same time part of the teaching personnel costs will obviously be allocated at least provisionally to UEAs other than teaching UEAs.

- Stage 2: semi-direct allocation; the cost allocated to UEAs supplying measured services is apportioned among UEAs receiving their output in proportion to consumption; it is essential to take account of reciprocal services and desirable to measure self-services.

- Stage 3: indirect allocation; the semi-direct cost of administrative and miscellaneous UEAs is apportioned among recipient UEAs in proportion to the rules of allocation designed to estimate unmeasured consumptions. The fact that it is difficult to link general service UEAs to directly productive UEAs without going through departmental administrative services implies two-stage treatment:

- apportionment of general service costs among departments;
- apportionment of administrative service costs of departments (including their share of general service costs and their share of teaching personnel costs resulting from the administrative duties performed by teachers) among the directly productive UEAs constituting them.

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1. C. Echevin: "Le budget temps des enseignants dans les universités françaises" (The time budget of teachers in French universities), University of Grenoble II.
2. C. Piganiol: "Enquête sur le budget temps des enseignants de l'Université de Paris X-Nanterre" (Survey on the time budget of teachers in the University of Paris X-Nanterre).

At the end of this work total costs are to be found in the accounts of the directly productive UEAs, determining their complete cost, with the exception of the charges directly allocated to output accounts.

The work is currently in progress in the French group which decided to try out the proposed methodology by calculating the activity costs of the same course in different universities; quantified components are therefore available at the beginning of 1974[1]; such evaluations are of course only provisional and fragmentary. Complete calculations will be carried out in the first half of 1974, the methodology having been supplemented in the light of the thoughts provoked by the first series of calculations.

ACTIVITY COSTS, OUTPUT COSTS AND RATIONAL UNIVERSITY MANAGEMENT

The interest of a relatively fine evaluation of activity costs remains limited to the comparison of real states in space or time. Attention should be drawn briefly to two possible uses of such costs in the projects of the French group.

Elaboration of output costs

It is feasible to calculate output costs only if the outputs can be described, enumerated and counted. In the present state of knowledge, these conditions limit the study of final outputs to instructional outputs alone, i.e. students who have taken part in one or more instructional activities, subject or not to control.

The classification will be based on the criterion adopted for the "field of study", i.e. the higher educational institution; this will make it possible to distinguish the following two categories:

1. Final outputs of instruction: students who have decided to leave the institution or who have obtained a particular degree of qualification (diploma or attestation) permetting them to leave the institution with a recognised qualification of higher level than they had on entering it.

Here we find:

- graduates: whether they leave the institution for good or remain there to obtain a higher degree.
- non-graduates who leave the institution either because they are giving up their studies after partial success or after failure, temporarily or finally, or because they decide to continue their studies in another institution (transfers); it should be noted that if the field selected were the educational system the latter would be regarded as intermediate outputs.

2. Intermediate outputs of instruction; students who have decided to remain in the institution and who have not obtained a degree; a distinction will be made between:

- students in the process of training.
- repeaters.

This distinction based on the criterion of a decision implies an accessory third category, outputs awaiting allocation, which covers students who have not obtained a diploma and have not yet, at the time of the survey, taken the decision to continue in the institution or to leave it.

Outputs having thus been defined, the transition from activity costs to output costs can then be made, but there are very real difficulties.

The development of pluridisciplinarity, the breakdown of each diploma into options and the possibilities of subject choice make it almost impossible to define homogeneous diplomas; moreover, the fact that each student proceeds at his own pace, as a result of possible repeats, makes it difficult to study cohorts, particularly since many universities are of recent creation and therefore have no historical data.

The only theoretically simple solution is therefore to have a file recording the individual progress of each student; knowing the instructional activities in which he has participated, his successes and failures, etc., it is then sufficient to give a value to each instructional UEA to obtain the cost of each student, whether he is in process of training or has finished.

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1. a) M. Clerc: "Note sur l'analyse des coûts de personnel de l'Université de Toulouse-Le-Mirail pendant l'année 1971-1972" (Note on the analysis of personnel costs in the University of Toulouse-Le-Mirail during the year 1971-1972).
   b) S. Cuenin: "Coûts unitaires d'activité. Premiers résultats" (Activity unit costs. First results) University of Dijon.
   c) G. Hamard: "Note sur le calcul des coûts unitaires des diverses catégories d'enseignants de l'UER de Sciences Economiques de l'Université de Paris X-Nanterre" (Note on the calculation of unit costs of the various categories of teachers in the UER (Economics) of the University of Paris X-Nanterre).
   d) B. Barbaudy, M. Jeudy, O. Kebiri, M. Potez: "Premières observations et résultats sur l'analyse du coût du personnel enseignant et des flux d'étudiants dans l'UER 2ème cycle de gestion de l'Université de Paris IX - Dauphine" (First observations and results of the analysis of teaching personnel costs and student flows in the UER 2nd cycle management of the University of Paris IX - Dauphine).
   e) G. Hamard: "Note sur le coût global en salaire des UEA de l'UER de Sciences Economiques (1er et 2ème cycles) de l'Université de Paris X-Nanterre" (Note on the total salary costs of UEAs of the UER (Economics) (1st and 2nd cycles) of the University of Paris X - Nanterre).
   f) G. Catoire: "Affectation des coûts directs en capital aux unités élémentaires d'enseignement de l'Université de Paris X - Nanterre" (Allocation of direct capital costs to elementary units of instruction of the University of Paris X - Nanterre).
   g) C. Cossu et al.: "Méthodologie employée par l'Université de Paris I pour le calcul des coûts en personnel" (Methodology employed by the University of Paris I for the calculation of personnel costs).
   h) J.C. Castagnos, N. Communod, C. Echevin: "Essai d'évaluation des coûts des activités universitaires. Modèle ECAU I" (Tentative evaluation of university activity costs. ECAU I model), Nos. 1, 2, 3. University of Grenoble II.

It is then easy to rearrange in categories according to the criteria of the analysis in order to determine average costs of outputs. The absence of historical data in most universities means that this part of the project can be carried out only in a few special cases.

Rational university management

The evaluations made can contribute to the improvement of French university management on two points:

a) Budgetary control in the strict sense would be meaningless in the French educational system. However, a certain measure of control might be established according to the following procedure:

- Determination of "normal" activity cost functions of full employment, based on past data corrected for wastage and other misuses detected, ard on productive processes assumed to be intangible.

- Application of these functions at the level of activity normally required for the real "external inputs" of the year studied.

- Control of the differences between activity budgetary functions adjusted to real requirements and real costs by a method such as variance analysis.

b) Contribution to decision-making in the context of a simulation model. Application is obvious (study of additional cost consequent on a pedagogical experiment, cost of a brochure, poster, etc.), provided of course that there is no attempt to draw normative conclusions; simulation cannot be substituted for decision-making, it can only help to throw light on the process.

For the universities in the French group as a whole, retrospective knowledge of costs is not a goal in itself; even if a great deal of time and effort is at present being spent on the thankless task of collecting data, identifying information, investigating teacher time budgets or the internal functioning of administrative and technical services, it should be remembered that this work is meaningful only when viewed in its true perspective, namely, to improve decision-making and management procedures in the university system.

G. ABRAHAM-FROIS.

Note for the reader

The documents referred to in the above article, resulting from the work done by the groups of French universities can be made available (in French only) to representatives of the member institutions of the IMHE Programme. Requests should state the exact title of the document(s) wanted and may be made either to the Programme Secretariat or to Professor Gilbert Abraham-Frois, UER de Sciences Economiques, Université de Paris X - Nanterre, 2, rue de Rouen, 92001 Nanterre - Cedex - France.